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GATES & COOPER LLP 6701 CENTER DRIVE WEST SUITE 1050 LOS ANGELES, CA 90045			EXAMINER CHEN, QING	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/939,813	Applicant(s) POOLE ET AL.	
	Examiner Qing Chen	Art Unit 2191	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-12 and 14-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-12 and 14-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This Office action is in response to the amendment filed on October 8, 2008.
2. **Claims 9-12 and 14-16** are pending.
3. **Claims 1-8, 13, and 17-24** have been canceled.
4. The objections to Claims 1-24 are withdrawn in view of Applicant's amendments to the claims or cancellation of the claims.
5. The 35 U.S.C. § 112, second paragraph, rejections of Claims 2-4, 6, 10-12, 14, 18-20, and 22 are withdrawn in view of Applicant's amendments to the claims or cancellation of the claims.
6. The 35 U.S.C. § 101 rejections of Claims 1-8 and 17-24 are withdrawn in view of Applicant's cancellation of the claims.
7. For clarity of the prosecution history record, although this Office action is in response to the amendment filed on October 8, 2008, the Applicant's arguments and amendments with respect to Claims 9-12 and 14-16 submitted in the amendment filed on August 25, 2008 are considered herein.

Response to Amendment

Specification

8. The disclosure is objected to because of the following informalities:
 - The attorney docket number should be deleted on page 1, lines 7 and 8.Appropriate correction is required.

Double Patenting

9. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the “right to exclude” granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

10. **Claim 9** is rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over Claim 1 of U.S. Patent No. 7,316,000 (hereinafter “‘000”). Although the conflicting claims are not identical, they are not patentably distinct from each other because Claim 9 of the instant application defines an obvious variation of the invention claimed in ‘000.

It is noted that the differences encompass replacement of the recitation of the limitations in the claims and they appear to be substantially the same or duplicate or in some instances obvious variations over one another. For example, the functions performed by Claim 9 of the

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instant application are the same or obvious over Claim 1 of '000 and as such are unpatentable for obviousness-type double patenting.

Patent 7,316,000	Instant Application 09/939,813
1. A computer-implemented system of developing multi-tier business applications, comprising:	9. A computer-implemented method for developing multi-tier business application for execution on a multiple tier network, comprising:
performed by a computer processor using memory;	creating and maintaining the multi-tier business application using an Integrated Development Environment (IDE) executed by a computer
an Integrated Development Environment (IDE), executed by a computer, for creating and maintaining a multi-tier business application on a multiple tier computer network, wherein the IDE includes a Topological Multi-Tier Business Application Composer that is used by a developer to graphically create and maintain the multi-tier business application,	wherein the Integrated Development Environment (IDE) includes a Topological Multi-Tier Business Application Composer that accepts commands from a developer, and in response thereto, graphically creates and maintains the multi-tier business application, the Topological Multi-Tier Business Application Composer includes a window and a palette, the palette contains graphical constructs, representing tiers of the multiple tier computer network and components of each of the tiers, that are used to create and maintain a graphical representation of the multi-tier business application in the window, and when creating the multi-tier business application, accepts commands from the developer, and in response thereto, creates and maintains the tiers, the components of each of the tiers, and defines processing performed by each of the components of each of the tiers
a Meta-model that captures and persistently stores information entered via the Composer, and	wherein the Integrated Development Environment includes a Meta-model that captures and persistently stores information from the Topological Multi-Tier Business Application Composer, the information including hardware, software and communications attributes used for analyzing an optimal development configuration for the multi-tier business application, and

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<p>an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization in a portion of the multi-tier business application based upon an heuristic analysis of information gathered by the Composer and stored within the Meta-model, wherein the Interactive Agent operates from a knowledge base stored as a part of the Meta-model, and the knowledge base is structured in such a way that the occurrence of the event causes the Interactive Agent to access the knowledge base to identify context information comprising a list of suggested and recommended actions for the event, in order to trigger a display of a graphical element including the context information in the Composer to interact with the developer.</p>	<p>wherein the Integrated Development Environment includes an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization of the multi-tier business application, and the occurrence of the event causes the Interactive Agent to display for the developer recommended actions to take in response for the event</p>
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Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 9-12 and 14-16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **US 6,208,345 (hereinafter “Sheard”)** in view of **US 6,854,107 (hereinafter “Green”)** and **US 6,002,868 (hereinafter “Jenkins”)**.

As per **Claim 9**, Sheard discloses:

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- creating and maintaining the multi-tier business application using an Integrated Development Environment (IDE) executed by a computer (*see Column 18: 64-67 to Column 19: 1-5, "In general, the visual interface 501 provides a visual framework within which all configuration, deployment, and runtime aspects of an integrated information system design or deployment may be accessed. The visual interface 501 provides a user the ability to graphically construct an information system and to effect physical connectivity between information storage, processing, and transmission components so as to graphically and physically implement an integrated information system."*),

- wherein the Integrated Development Environment (IDE) includes a Topological Multi-Tier Business Application Composer that accepts commands from a developer, and in response thereto, graphically creates and maintains the multi-tier business application, the Topological Multi-Tier Business Application Composer includes a window and a palette, the palette contains graphical constructs, representing tiers of the multiple tier computer network and components of each of the tiers, that are used to create and maintain a graphical representation of the multi-tier business application in the window (*see Column 20: 3-9, "The System Integration view, which may be activated using tab 520, provides the ability using drag-and-drop techniques to visually construct and configure a data integration implementation using a palette of stock integration adapters typically packaged as part of a business extension module. FIG. 18 illustrates a data integration implementation as seen using the System Integration view."*; *Column 23: 10-15, "In typical use, the user designs a data integration layout when the System Integration view is active by selecting various adapters and components displayed in the palette*

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530 of the visual interface 501. This is achieved by dragging selected adapters from the palette 530 and dropping them onto the canvas 540 using a mouse or other input device.”),

- wherein the Integrated Development Environment includes a Meta-model that captures and persistently stores information from the Topological Multi-Tier Business Application Composer, the information including hardware, software and communications attributes used for analyzing an optimal development configuration for the multi-tier business application (*see Column 21: 15-24, “As was discussed previously, the data meta-models represent format neutral models of the input and output data requirements of the disparate systems of a data integration project. The use of data meta-models removes any cross-dependencies that exist between the various systems and technologies implicated in the data integration project, and permits the establishing and modifying of interconnections between system components using visual drag-and-drop and meta-model mapping metaphores.”; Column 23: 48-51, “By comparing the meta-data models of two connected adapters, it is possible to determine whether the two meta-data models are compatible.”; Column 29: 33-40, “As was discussed previously, a meta-model approach is used to provide a system wide specification of object and contained attribute definitions that can be used to illustrate object layout, instantiate objects, and provide for translation from one meta-defined class to another. Each adapter accepts data in a specific defined meta-model definition, manipulates the data, and produces output data in a new meta-model definition.”), and*

- wherein the Integrated Development Environment includes an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization of the multi-tier business application (*see Column 23: 51-55, “If the two meta-data*

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models are determined to be incompatible, the two adapters in question are visually marked in the canvas 540 to indicate the presence of a configuration error, such as by the use of an "X" or other warning indicia.").

However, Sheard does not disclose:

- when creating the multi-tier business application, accepts commands from the developer, and in response thereto, creates and maintains the tiers, the components of each of the tiers, and defines processing performed by each of the components of each of the tiers; and
- the occurrence of the event causes the Interactive Agent to display for the developer recommended actions to take in response for the event.

Green discloses:

- when creating the multi-tier business application, accepts commands from the developer, and in response thereto, creates and maintains the tiers, the components of each of the tiers, and defines processing performed by each of the components of each of the tiers (*see Column 1: 16-21, "... the design of a software component architecture for the development of extensible tier software component applications ..."; Column 2: 48-54, "The present invention specifies a method and a system for creating architectures to implement an N-tier system wherein a software component designer can design or select each software component 20 to perform specified functionality and ensure that each software component 20 has the interfaces specified by the architecture for that tier 30."; Column 4: 4-6, "In a currently preferred embodiment, each tier 30 logically groups together software components 20 that have a similar type of behavior."* and 56-62, "... the present invention provides rules to define and create a particular N-tier architecture (creating a multi-tier business application) with a specified, initial

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number and type of tiers ... where each initial tier satisfies one of a major portion of system functionality (defines processing performed by each of the components of each of the tier), such as business logic ...”).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Green into the teaching of Sheard to include when creating the multi-tier business application, accepts commands from the developer, and in response thereto, creates and maintains the tiers, the components of each of the tiers, and defines processing performed by each of the components of each of the tiers. The modification would be obvious because one of ordinary skill in the art would be motivated to implement an N-tier system wherein a software component designer can design or select each software component to perform specified functionality and ensure that each software component has the interfaces specified by the architecture for that tier (*see Green – Column 2: 48-54*).

Jenkins discloses:

- the occurrence of the event causes the Interactive Agent to display for the developer recommended actions to take in response for the event (*see Column 8: 34-53, “The recommended action module 220 contains information on what to do to fix an error. The error handler 218 uses this information to recommend a corrective action or response to the error. The recommended action module 220 holds several possible recommendations for each possible error.” and “The front end module 210 is the main program and user interface module. It is responsible for: ... 7) displaying all errors and recommended actions ...”).*

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the teaching of Jenkins into the teaching of Sheard to include

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the occurrence of the event causes the Interactive Agent to display for the developer recommended actions to take in response for the event. The modification would be obvious because one of ordinary skill in the art would be motivated to recommend a corrective action or response to an error (*see Jenkins – Column 8: 34-39*).

As per **Claim 10**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

- wherein the graphical constructs are dragged from the palette onto the window, and thereafter connected together, in a topological structure for the multi-tier business application (*see Column 23: 10-15, “... selecting various adapters and components displayed in the palette ... dragging ... and dropping them onto the canvas ...” and 22-23, “... selected adapters/components may be linked (connected) together ...”*).

As per **Claim 11**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

- wherein the components are workstations, servers, application files, connections, data paths, user-defined processes, and other user-defined elements (*see Figures 1, 5B, and 20; Column 24: 55-67, “... distribution planning panel ... provides a tree view of the network environment currently in operation for a selected data integration project ... workstations ...”; Column 28: 66 and 67 to Column 29: 1-4, “For each workstation participating in a data integration project ...”; Column 29: 18 and 19, “... communication may be effected through use of a sockets type protocol.”*).

As per **Claim 12**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

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- wherein the Topological Multi-Tier Business Application Composer is used for specifying properties that identify each of the tiers and the components of the tiers (*see Column 25: 17-22, "The right portion of the distribution planning panel includes a property sheet which is used to show the data associated with a selected item ... property sheet presents configuration data ..."*).

As per **Claim 14**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

- wherein the captured information is information about tiers, workstations, servers, application files, connections, data paths, user-defined processes, and other user-defined elements (*see Column 3: 34-43, "Format neutral data meta-models are employed to model the input and output data requirements (captured information) of disparate systems and system components ..."; Column 6: 27-32, "These component building blocks are graphical representations of various data processing and telecommunications hardware and software elements (tiers, workstations, servers, application files, connections, data paths, user-defined processes, and other user-defined elements) ..."*).

As per **Claim 15**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

- wherein the Meta-model is updated and kept in synchronization with any updates made to the multi-tier business application via the Topological Multi-Tier Business Application Composer (*see Column 23: 47-51, "... meta-data model which indicates the data that the adapter is expecting to receive and dispatch ..."; Column 24: 19, "... meta-data model issues have been resolved (updated) ..."; Column 25: 44-45, "... updating the charts dynamically ..."*).

As per **Claim 16**, the rejection of **Claim 9** is incorporated; and Sheard further discloses:

- wherein the Meta-model is accessible by other tools (*see Column 23: 41-45, “Confirming the integrity of the communication channel established between two adapters is accomplished by comparing the meta-data models of the source and destination adapters and determining whether the models are compatible ...”; Column 31: 13-36, “Various meta-model conversion utilities (tools) may be implemented ...”*).

Response to Arguments

13. Applicant’s arguments with respect to Claim 9 have been considered but are moot in view of the new ground(s) of rejection.

In the Remarks, Applicant argues:

a) For example, Sheard describe a visual data integration system for visually linking data exchange components so as to visually define data communications interfaces of an integrated information system. Once fully configured, and with any necessary customization completed, a click of a button activates the runtime deployment of the integrated information system. However, Sheard does not teach or suggest functions for analyzing an optimal deployment configuration or the use of an Interactive Agent that monitors the Meta-model for an occurrence of an event that comprises a possible non-optimization of the multi-tier business application, wherein the occurrence of the event causes the Interactive Agent to display for the developer recommended actions to take in response for the event.

Examiner's response:

a) Examiner disagrees. Applicant's arguments are not persuasive for at least the following reasons:

First, without acquiescing to the Applicant's assertion that Sheard does not teach or suggest functions for analyzing an optimal deployment configuration, the Examiner first submits that the claim recites, exactly, "the information including hardware, software and communications attributes used for analyzing an optimal development configuration for the multi-tier business application" (emphasis added). In accordance with MPEP § 2106(II)(C), "[l]anguage that suggests or makes optional but does not require steps to be performed or does not limit a claim to a particular structure does not limit the scope of a claim or claim limitation." A recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure (*i.e.*, the meta-model) is capable of performing the intended use, then it satisfies the claim.

Second, with respect to the Applicant's assertion that Sheard does not teach or suggest functions for analyzing an optimal deployment configuration, the Examiner respectfully submits that Sheard clearly discloses functions for analyzing an optimal deployment configuration (*see Column 21: 15-24, "As was discussed previously, the data meta-models represent format neutral models of the input and output data requirements of the disparate systems of a data integration project. The use of data meta-models removes any cross-dependencies that exist between the various systems and technologies implicated in the data integration project, and permits the*

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establishing and modifying of interconnections between system components using visual drag-and-drop and meta-model mapping metaphores.”; Column 23: 48-51, “By comparing the meta-data models of two connected adapters, it is possible to determine whether the two meta-data models are compatible.”; Column 29: 33-40, “As was discussed previously, a meta-model approach is used to provide a system wide specification of object and contained attribute definitions that can be used to illustrate object layout, instantiate objects, and provide for translation from one meta-defined class to another. Each adapter accepts data in a specific defined meta-model definition, manipulates the data, and produces output data in a new meta-model definition.”).

Therefore, for at least the reasons set forth above, the rejection made under 35 U.S.C. § 103(a) with respect to Claim 9 is proper and therefore, maintained.

Conclusion

14. The prior art made of record and not relied upon is considered pertinent to Applicant’s disclosure.

15. Applicant’s amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

16. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Qing Chen whose telephone number is 571-270-1071. The Examiner can normally be reached on Monday through Thursday from 7:30 AM to 4:00 PM. The Examiner can also be reached on alternate Fridays.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Wei Zhen, can be reached on 571-272-3708. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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/Q. C./

Examiner, Art Unit 2191

/Wei Y Zhen/

Supervisory Patent Examiner, Art Unit 2191